

ABSTRACT OF THE DISCLOSURE

According to the present invention, an improved waveguide device utilizes an
5 advantageously designed optically functional cladding region and an associated modulation
controller to address design challenges in applications requiring modulation, attenuation, control,
switching, etc. of optical signals. In accordance with one embodiment of the present invention,
an electrooptic modulator is provided comprising an optical waveguide, a cladding optically
coupled to the optical waveguide, an optically functional cladding region defined in at least a
10 portion of the cladding, and a modulation controller configured to provide a modulating control
signal to the optically functional cladding region. The modulation controller is configured to
generate an electric field in the optically functional region in response to a biased modulating RF
control signal.